



# UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE  
United States Patent and Trademark Office  
Address: COMMISSIONER FOR PATENTS  
P.O. Box 1450  
Alexandria, Virginia 22313-1450  
www.uspto.gov

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/563,583	06/13/2006	Holger Behrens	HM-692PCT	3257

40570 7590 04/30/2007  
FRIEDRICH KUEFFNER  
317 MADISON AVENUE, SUITE 910  
NEW YORK, NY 10017

EXAMINER
----------

LAMB, BRENDA A

ART UNIT	PAPER NUMBER
----------	--------------

1734

SHORTENED STATUTORY PERIOD OF RESPONSE	MAIL DATE	DELIVERY MODE
3 MONTHS	04/30/2007	PAPER

**Please find below and/or attached an Office communication concerning this application or proceeding.**

If NO period for reply is specified above, the maximum statutory period will apply and will expire 6 MONTHS from the mailing date of this communication.

## Office Action Summary

**Application No.**

10/563,583

**Applicant(s)**

BEHRENS ET AL.

**Examiner**

Brenda A. Lamb

**Art Unit**

1734

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

**Period for Reply**

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

**Status**

- 1) ☒ Responsive to communication(s) filed on 06 January 2006.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

**Disposition of Claims**

- 4) ☒ Claim(s) 1-13 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1-13 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

**Application Papers**

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
- Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

**Priority under 35 U.S.C. § 119**

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some \* c) ☐ None of:
- ☐ Certified copies of the priority documents have been received.
  - ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
  - ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

**Attachment(s)**

- ☒ Notice of References Cited (PTO-892)
- ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- ☒ Information Disclosure Statement(s) (PTO/SB/08)  
Paper No(s)/Mail Date 1/06/06.
- ☐ Interview Summary (PTO-413)  
Paper No(s)/Mail Date. \_\_\_\_\_.
- ☐ Notice of Informal Patent Application
- ☐ Other: \_\_\_\_\_.

Art Unit: 1734

The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

Claims 1-13 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

Claim 1 is confusing since it unclear what the device for hot dip coating encompasses and unclear whether one is coating a metal strand or a metal strip. It is suggested that applicant amend claim 1 at line 2 after "strand (1)" delete "especially a steel strip, in which the metal strand (1) is passed vertically through" and insert -- said device comprising --; at line 4 of claim 1 before "a guide channel" delete "through"; at line 4 of claim 1 after "guide channel (4)" delete "upstream of the coating tank (3), with" and insert --, wherein the guide channel (4) is arranged upstream, relative to the direction of travel of a metal strand (1), of the coating tank (3) such that the strand (1) is passed vertically through the guide channel (4) and then through the coating tank (3), and wherein the guide channel (4) is comprised of --. The term "the flow deflection element" in claim 9 lacks proper antecedent basis.

Claims 11-13 are objected to under 37 CFR 1.75 as being a substantial duplicate of claims 6-8. When two claims in an application are duplicates or else are so close in content that they both cover the same thing, despite a slight difference in wording, it is proper after allowing one claim to object to the other as being a substantial duplicate of the allowed claim. See MPEP § 706.03(k).

Art Unit: 1734

The drawings are objected to under 37 CFR 1.83(a). The drawings must show every feature of the invention specified in the claims. Therefore, the flow deflection element is designed as a flat narrow plate whose longitudinal axis is perpendicular to the direction of conveyance of the metal strand and perpendicular to the direction normal to the surface of the metal strand must be shown or the feature(s) canceled from the claim(s). No new matter should be entered.

Corrected drawing sheets in compliance with 37 CFR 1.121(d) are required in reply to the Office action to avoid abandonment of the application. Any amended replacement drawing sheet should include all of the figures appearing on the immediate prior version of the sheet, even if only one figure is being amended. The figure or figure number of an amended drawing should not be labeled as "amended." If a drawing figure is to be canceled, the appropriate figure must be removed from the replacement sheet, and where necessary, the remaining figures must be renumbered and appropriate changes made to the brief description of the several views of the drawings for consistency. Additional replacement sheets may be necessary to show the renumbering of the remaining figures. Each drawing sheet submitted after the filing date of an application must be labeled in the top margin as either "Replacement Sheet" or "New Sheet" pursuant to 37 CFR 1.121(d). If the changes are not accepted by the examiner, the applicant will be notified and informed of any required corrective action in the next Office action. The objection to the drawings will not be held in abeyance.

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

Art Unit: 1734

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

This application currently names joint inventors. In considering patentability of the claims under 35 U.S.C. 103(a), the examiner presumes that the subject matter of the various claims was commonly owned at the time any inventions covered therein were made absent any evidence to the contrary. Applicant is advised of the obligation under 37 CFR 1.56 to point out the inventor and invention dates of each claim that was not commonly owned at the time a later invention was made in order for the examiner to consider the applicability of 35 U.S.C. 103(c) and potential 35 U.S.C. 102(e), (f) or (g) prior art under 35 U.S.C. 103(a).

Claim 1 is rejected under 35 U.S.C. 102(b) as being anticipated by Japan 11-193451.

Japan '451 teaches as shown in Figure 1 that the design of a device for hot dip coating a metal strip which is comprised of the following elements: a coating tank that contains the molten coating metal and a guide channel the guide channel is arranged upstream, relative to the direction of travel of a metal strand, of the coating tank such that the strand is passed vertically through the guide channel and then through the coating tank, and wherein the guide channel is comprised of at least two inductors (17a, 17b) for inducing an electromagnetic field, which are installed on both sides of the metal strand in the area of the guide channel in order to keep the coating metal in the coating tank, wherein the distance (d) between the walls that bound the guide channel is not constant in the direction (N) normal to the surface of the metal strand in the region (H)

Art Unit: 1734

of the vertical extent of the guide channel between the lower end of the guide channel and the bottom of the coating tank, such that the walls that bound the guide channel have a constriction or an expansion. Japan '451 teaches every structural element of the claimed apparatus as set forth in claim 1.

Claim 2 is rejected under 35 U.S.C. 103(a) as being unpatentable over Japan 11-193451.

Japan '451 is applied for the reason noted above. Japan '451 fails to teach the cross section of the expansion has a circular segment. However, if one desires to coat a substrate having a circular cross section, it would have been prima facie obvious to optimize the cross section of the expansion of Japan '451 such that it has a circular segment since Japan '451 show in his figures that the cross-section of the guide channel and entrance opening matches the substrate being coated.

Claim 3 is rejected under 35 U.S.C. 103(a) as being unpatentable over Japan 11-193451 in view of Japan 07-76759.

Japan '451 is applied for reasons noted above but fails to teach the device includes a flow deflection plate is arranged in the coating tank. However, it would have been obvious to modify Japan '451 apparatus as discussed above to include a flow deflection plate such as taught Japan '759 for the obvious advantage of guiding flow within the hot molten metal bath.

Claims 6, 8, 11 and 13 are rejected under 35 U.S.C. 103(a) as being unpatentable over Japan 11-193451 in view of Huxley 928,385.

Art Unit: 1734

Japan '451 is applied for reasons noted above but fails to teach the device includes a bath relaxation plate is arranged in the coating tank (3) near the surface of the coating metal. However, it would have been obvious to modify the Japan '451 apparatus to provide plate consisting of a ceramic material near the surface of the molten metal bath since Huxley teaches doing so for the taught advantage of protecting the bath from contaminating influences.

Claims 6-7 and 11-12 are rejected under 35 U.S.C. 103(a) as being unpatentable over Japan 11-193451 in view of Japan 55-104466.

Japan '451 is applied for reasons noted above but fails to teach the device includes a bath relaxation plate is arranged in the coating tank (3) near the surface of the coating metal. However, it would have been obvious to modify the Japan '451 apparatus to provide vertical adjustable plate near the surface of the bath since Japan '466 teaches doing so for the obvious advantage of protecting the bath from contaminating influences.

Claims 3-4 and 9 are rejected under 35 U.S.C. 103(a) as being unpatentable over Japan 11-193451 in view of Yamanaka et al.

Japan '451 is applied for reasons noted above but fails to teach the device includes a flow deflection plate is arranged in the coating tank. However, it would have been obvious to modify Japan '451 apparatus as discussed above to include a flow deflection plate or a buffer member such as taught by Yamanaka et al in the coating tank and arranged it in the manner set forth in the claims for the taught advantages of providing control of the coating within the coating tank.

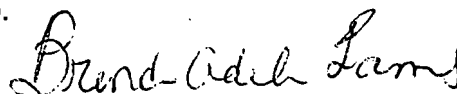
Art Unit: 1734

Claim 5 and 10 would be allowable if rewritten to overcome the rejection(s) under 35 U.S.C. 112, 2nd paragraph, set forth in this Office action and to include all of the limitations of the base claim and any intervening claims.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Brenda A. Lamb whose telephone number is (571) 272-1231. The examiner can normally be reached on Monday-Tuesday and Thursday-Friday with alternate Wednesdays off.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Chris Fiorilla, can be reached on (571) 272-1231. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).



Brenda A Lamb  
Examiner  
Art Unit 1734